## PROJECT DESCRIPTION

THIS PROJECT INVOLVES THE MODIFICATION OF THE EXISTING TRAFFIC CONTROL SIGNAL AT THE INTERSECTION OF MD 2 AND SERVICE ROAD IN ANNE ARUNDEL COUNTY. MD 2 IS ASSUMED TO RUN IN A NORTH-SOUTH DIRECTION.

# INTERSECTION OPERATION

THE EXISTING EIGHT-PHASE, FULLY ACTUATED NEMA CONTROLLER HOUSED IN A BASE MOUNTED CABINET IS BEING USED.

THE CONTROLLER WILL NOW OPERATE AS A SIX-PHASE FULL-TRAFFIC-ACTUATED CONTROLLER WITH EXCLUSIVE LEFT TURN PHASES FOR NORTHBOUND AND SOUTHBOUND MD 2 AND AN ALTERNATE PEDESTRIAN PHASE FOR THE NORTH LEG OF MD 2.

|                  | 1             | 2<br>(N-)<br>(V)-)   | 3<br>(R)<br>(Y)<br>(G) | 4<br>(R)<br>(Y)<br>(G) | 5<br>(R)<br>(V)<br>(G) | 6 ( )  | 7<br>R<br>Y<br>G | 8<br>R<br>Y<br>G | 9<br>(R)<br>(Y)<br>(G) | 10<br>R<br>Y | 11<br>R<br>Y<br>G | 12<br>(R)<br>(Y)<br>(G) | 13<br>R<br>Y<br>G | 1 4<br>R<br>Y<br>G | 13<br>(所)<br>(子) | 14<br>(%)<br>+ |            |
|------------------|---------------|--|------------------------|------------------------|------------------------|--|------------------|------------------|------------------------|--------------|-------------------|-------------------------|-------------------|--------------------|------------------|----------------|------------|
| PHASE 1 & 5      | ⊲G-           |  | R                      | R                      | ⊲G-                    | ⊲G−  | R                | R                | R                      | R            | R                 | R                       | R                 | R                  | DW               | DW             | 7          |
| 1 & 5 CHANGE     | PHA           | SE 1 &   | 5 CHA                  | NGE MA                 | Y CHAN                 | GE TO  | PHASE            | 1 & 6,           | 2 & 5                  | OR 2         | & 6               |                         |                   |                    |                  |                | Y.         |
| PHASE 1 & 6      | ⊲G-           | ⊲G-  | G                      | G                      | < R                    | ⊲R-  | R                | R                | R                      | R            | R                 | R                       | R                 | R                  | DW               | DW             | 7          |
| 1 & 6 CHANGE     | < <b>∀</b> Y− |  | G                      | G                      | ⊲R-                    | ⊲R-  | R                | R                | R                      | R            | R                 | R                       | R                 | R                  | DW               | DW             |            |
| PHASE 2 & 5      | ⊲R−           | ⊲R−  | R                      | R                      | ⊲G-                    | <6-  | G                | G                | R                      | R            | R                 | R                       | R                 | R                  | DW               | DW <           | 4          |
| 2 & 5 CHANGE     | ⊲R−           | <r-< td=""><td>R</td><td>R</td><td>&lt;<b>∀</b>Y−</td><td><b>⊲</b>Y−</td><td>G</td><td>G</td><td>R</td><td>R</td><td>R</td><td>R</td><td>R</td><td>R</td><td>DW</td><td>DW -</td><td><b>→</b></td></r-<> | R                      | R                      | < <b>∀</b> Y−          | <b>⊲</b> Y−  | G                | G                | R                      | R            | R                 | R                       | R                 | R                  | DW               | DW -           | <b>→</b>   |
| PHASE 2 & 6      | ⊲R-           | ⊲R-  | G                      | G                      | ⊲R−                    | <r−< td=""><td>G</td><td>G</td><td>R</td><td>R</td><td>R</td><td>R</td><td>R</td><td>R</td><td>DW</td><td>DW</td><td>&lt;<u>−</u></td></r−<> | G                | G                | R                      | R            | R                 | R                       | R                 | R                  | DW               | DW             | < <u>−</u> |
| 2 & 6 CHANGE     | ⊲R-           | ⊲R-  | Υ                      | Υ                      | ⊲R−                    | <r−< td=""><td>Υ</td><td>Υ</td><td>R</td><td>R</td><td>R</td><td>R</td><td>R</td><td>R</td><td>DW</td><td>DW -</td><td>т</td></r−<>          | Υ                | Υ                | R                      | R            | R                 | R                       | R                 | R                  | DW               | DW -           | т          |
| PHASE 4 & 8      | ⊲R-           | ⊲R-  | R                      | R                      | ⊲R−                    | <r−< td=""><td>R</td><td>R</td><td>G</td><td>G</td><td>G</td><td>G</td><td>G</td><td>G</td><td>DW</td><td>DW</td><td>ΠŶ</td></r−<>           | R                | R                | G                      | G            | G                 | G                       | G                 | G                  | DW               | DW             | ΠŶ         |
| 4 & 8 CHANGE     | ⊲R-           | < R  | R                      | R                      | ⊲R-                    | ⊲R-  | R                | R                | Υ                      | Υ            | Υ                 | Υ                       | Υ                 | Υ                  | DW               | DW             | <b>→</b>   |
| PHASE 4 & 8 ALT. | ⊲R-           | ⊲R-  | R                      | R                      | ⊲R-                    | ⊲R−  | R                | R                | G                      | G            | G                 | G                       | G                 | G                  | WK               | WK             | 9 7        |
| PED CLEAR        | ⊲R-           | ⊲R-  | R                      | R                      | ⊲R-                    | ⊲R−  | R                | R                | G                      | G            | G                 | G                       | G                 | G                  | FL/DW            | FL/DW          |            |
| 4 & 8 ALT.CHANGE | < R−          | ⊲R−  | R                      | R                      | ⊲R                     | ⊲R-  | R                | R                | Υ                      | Υ            | Υ                 | Υ                       | Y                 | Υ                  | DW               | DW             | 1          |
| FLASHING         | FI /D         |  |                        |                        | <b>5</b> 1 (5          |  |                  |                  |                        |              | (-                |                         |                   |                    |                  |                | 7          |

PHASING CHART

# WIRING DIAGRAM C, E — /──D,E,H \_\_\_D,E,H,EC F,EC----— D,E,H,EC G,EC — \_\_\_D,E,F,H,EC \_\_\_\_A,B,D,E,F,H,EC F,G,EC— └─ A,B,EC

# EQUIPMENT LIST "A"

A. APPROVED SHA EQUIPMENT TO BE PURCHASED BY THE DEVELOPER AND INSTALLED BY THE CONTRACTOR. ALL EQUIPMENT IN THIS LIST SHALL HAVE CATALOG CUTS SUBMITTED FOR APPROVAL PRIOR TO INSTALLATION.

ITEM NO.

DESCRIPTION

NONE

OPERATION

#### CONTACT PERSONS FOR DISTRICT 2 ARE AS FOLLOWS:

MR. ROBERT KIEL ASSISTANT DISTRICT ENGINEER - TRAFFIC (410) 778-3061

QUANTITY

MR. TERRY WRIGHT ASSISTANT DISTRICT ENGINEER - MAINTENANCE (410) 778-3061

MR. BARRY CLOTHIER ASSISTANT DISTRICT ENGINEER - UTILITIES (410) 778-3061

#### CONTACTS FOR OFFICE OF TRAFFIC AND SAFETY

MR. RICHARD DAFF, SR. CHIEF, TRAFFIC OPERATIONS (410) 787-7630

MR. EUGENE BAILEY TEAM LEADER SIGN OPERATIONS (410) 787-7676

MR. ROBERT SNYDER ASSISTANT DIVISION CHIEF. TRAFFIC OPERATIONS (410) 787-7631

MS. DARLENE EIDE SUPPLY OFFICE SIGNAL SHOP WAREHOUSE (410) 787-7668

MR. ED RODENHIZER TEAM LEADER SIGNAL OPERATIONS (410) 787-7652

### EQUIPMENT LIST "B"

B. EQUIPMENT TO BE FURNISHED AND/OR INSTALLED BY CONTRACTOR ALL EQUIPMENT SHALL HAVE CATALOG CUTS SUBMITTED TO OOTS FOR APPROVAL PRIOR TO INSTALLATION.

| ITEM NO.       | QUANTITY | DESCRIPTION  |  |  |  |  |
|----------------|----------|--|--|--|--|--|
| 1001           | 1 EA     | MAINTENANCE OF TRAFFIC                                       |  |  |  |  |
| 2002           | 1 CY     | TEST PIT EXCAVATION  |  |  |  |  |
| 5005           | 25 LF    | FURNISH AND INSTALL 24 IN. WHITE HEAT APPLIED PERMANENT      |  |  |  |  |
|                |          | THERMOPLASTIC PAVEMENT MARKING                               |  |  |  |  |
| 8011           | 14 EA    | FURNISH AND INSTALL 12 IN. VEHICULAR SIGNAL HEAD SECTION     |  |  |  |  |
| 8022           | 1 EA     | FURNISH AND INSTALL 50 FT, MAST ARM AND POLE                 |  |  |  |  |
| 8048           | LS       | REMOVE AND DISPOSE OF EXISTING EQUIPMENT                     |  |  |  |  |
| 8051           | 30 LF    | FURNISH AND INSTALL 3 IN. SCHEDULE 80 RIGID ELECTRICAL PVC   |  |  |  |  |
|                |          | CONDUIT - TRENCHED   |  |  |  |  |
| 8057           | 3 CY     | FURNISH AND INSTALL CONCRETE FOR SIGNAL FOUNDATION           |  |  |  |  |
| 8060           | 170 LF   | FURNISH AND INSTALL NO. 6 AWG STRANDED BARE COPPER WIRE      |  |  |  |  |
| 8062           | 80 LF    | FURNISH AND INSTALL 1 IN. GALVANIZED CONDUIT DETECTOR SLEEVE |  |  |  |  |
| 8080           | 1 EA     | FURNISH AND INSTALL GROUND ROD 3/4 IN. DIAMETER X 10 FT.     |  |  |  |  |
|                |          | LENGTH   |  |  |  |  |
| 8081           | 25 LF    | FURNISH AND INSTALL ELECTRICAL CABLE 2-CONDUCTOR             |  |  |  |  |
|                |          | ALUMINUM SHIELDED  |  |  |  |  |
| 8084           | 35 LF    | FURNISH AND INSTALL ELECTRICAL CABLE 5-CONDUCTOR             |  |  |  |  |
|                |          | NO. 14 AWG   |  |  |  |  |
| 8085           | 700 LF   | FURNISH AND INSTALL ELECTRICAL CABLE 7-CONDUCTOR             |  |  |  |  |
|                |          | ND. 14 AWG   |  |  |  |  |
| 8087           | 1000 LF  | FURNISH AND INSTALL LOOP WIRE ENCASED IN 1/4 IN. FLEXIBLE    |  |  |  |  |
|                |          | TUBING (NO. 14 AWG)  |  |  |  |  |
| 8088           | 230 LF   | FURNISH AND INSTALL SAW CUT FOR LOOP DETECTOR                |  |  |  |  |
|                | 1 EA     | FURNISH AND INSTALL R3-5(L) SIGN (30" X 36")                 |  |  |  |  |
|                |          | MAST ARM MOUNT   |  |  |  |  |
|                | 1 EA     | FURNISH AND INSTALL SHIELD ASSEMBLY M3-3 SIGN (12" X 24")    |  |  |  |  |
|                |          | M1-5 SIGN (24" X 24"), M6-1 SIGN (24" X 30") MAST ARM        |  |  |  |  |
|                |          | POLE MOUNT   |  |  |  |  |
| Allend crosses | 1 EA     | FURNISH AND INSTALL SHIELD ASSEMBLY M3-1 SIGN (12" X 24")    |  |  |  |  |
|                |          | M1-5 SIGN (24" X 24"), M6-1 SIGN (24" X 30") MAST ARM        |  |  |  |  |
|                |          | POLE MOUNT   |  |  |  |  |
|                | 1 EA     | FURNISH AND INSTALL R3-4 SIGN (24" X 24") MAST ARM MOUNT     |  |  |  |  |
|                |          |  |  |  |  |  |

## EQUIPMENT LIST "C"

C. EXISTING EQUIPMENT TO BE REMOVED BY THE CONTRACTOR AND DELIVERED TO THE STATE HIGHWAY ADMINISTRATION, 7491 CONNELLEY DRIVE, HANOVER, MARYLAND 21076. THE CONTRACTOR SHALL NOTIFY THE SHA AT (410) 787-7652 AT LEAST THREE DAYS IN ADVANCE OF DELIVERY.

ITEM NO.

QUANTITY

DESCRIPTION

NONE

ALL SIGNAL EQUIPMENT TO BE REMOVED SHALL BECOME THE PROPERTY OF THE CONTRACTOR

TRAFFIC CONCEPTS, INC.

325 Gambrills Road Suite E Gambrills, MD 21054 (410) 923-7101

MARYLAND DOT - STATE HIGHWAY ADMINISTRATION
Office of Traffic & Safety Office of Traffic & Safety TRAFFIC ENGINEERING DESIGN DIVISION GENERAL INFORMATION

MD 2 (SOLOMONS ISLAND RD.) AND SERVICE ROAD

SHEET NO.

2 OF 2

| DRAWN BY:   | M.HOWELL | F.A.P. NO. |              | TS NO.      |
|-------------|----------|------------|--------------|-------------|
| CHECKED BY: | T.ZAYDEL | S.H.A. NO. |              | 3891 A G    |
| SCALE:      | I' = 20' | COUNTY:    | ANNE ARUNDEL | T.I.M.S. NO |
| DATE:       | 11-22-02 | LOG MILE:  | 020020117.35 | F527        |
| L           |          |            |              |             |

m:\1000\02-1081\md2atservicerdsig. Jan. 17, 2003 15:51:50

WIRING KEY

C 5 CONDUCTOR ELECTRICAL CABLE

D-G 7 CONDUCTOR ELECTRICAL CABLE

H STRANDED BARE COPPER GROUND WIRE (NO. 6 A.W.G.)

LW LOOP WIRE (NO. 14 A.W.G.)

CABLE (NO. 14 A.W.G.) ALUMINUM

A-B 2-CONDUCTOR ELECTRICAL

(NO, 14 A.W.G.)

(NO. 14 A.W.G.)

SHIELDED

EC EXISTING CABLE

💢 GROUND ROD